MISCELLANEOUS NOTES

1. INTERSPECIFIC PLAY BEHAVIOUR BETWEEN HANUMAN LANGUR *PRESBYTIS ENTELLUS* AND RHESUS MACAQUE *MACACA MULATTA*

Polyspecific associations in non-human primates have been reported from a number of study sites (Bernstein 1967, Freeland 1977, Rudran 1978, Das and Sharma, 1980). Association of macaques *Macaca mulatta* with langurs *Presbytis entellus* has also been noted in different places (Parthasarathy 1972, Roonwal and Mohnot 1977, Pirta 1984). In Jaipur *Presbytis entellus* and *Macaca mulatta* coexist at Ambagarh Reserve Forest 9 km north-east of Jaipur city, where five groups of rhesus monkeys and one group of langurs live. The home ranges of the two species overlap and both species mix during provisioning of food by pilgrims. Data on interactions between these two species were collected systematically early morning and evening during 1986-1987 for 350 hours. "Sampling all occurrences of some behaviour" was the method (Altmann 1974) for recording interactions. Most of the time (65.7%) the individuals of the two species were not in association (distance between the species more than 10 m). They mixed with one another only 34.3% of the time.

Play behaviour between juveniles and infants of both species was significant. This kind of affinitive behaviour was observed mostly during evening hours. Out of total 456 episodes (all kinds of interactions) 140 play interactions took place between rhesus juveniles and langur juveniles. On 22 occasions play was between rhesus juveniles and langur infants (Table 1). But langur infants played with rhesus juveniles only in the vicinity of their mothers. Interactions between infants of the two species were mostly play. Langur juveniles played a great deal with rhesus juveniles (81.7%), and somewhat less with rhesus infants (69.3%). Langur infants initiated play only with rhesus juveniles and infants (Table 2).

The play behaviour observed during the study was varied, such as play initiation, somersaulting, chase, touch and non-contact (Dolhinow 1972). Infants raised in polyspecific groups like this could be expected to develop social bonds with other species.

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TABLE 1
RHESUS JUVENILE AND INFANT INTERACTION —PLAY BEHAVIOUR TOWARDS LANGUR YOUNG

Trans-mitter	Recei-ver	Chase	%	Sup-plant	%	Threat	%	Attack	%	Play	%	Misc.	%	Total
RJ	LJ	51	16	57	17.9	46	14.5	19	5.9	140	44.1	4	2.2	317
RJ	LI	0	0	0	0	0	0	0	0	22	100.0	0	0	22
RI	LJ	10	18.8	1	1.8	5	9.4	3	5.6	27	50.9	7	13.2	53
RI	LI	13	11.1	4	3.4	13	11.1	6	5.1	79	67.5	2	1.7	117
		74		62		64		28		268		13		509

RJ = Rhesus juvenile, RI = Rhesus infant, LJ = Langur juvenile, LI = Langur infant.

TABLE 2
LANGUR JUVENILE AND INFANT INTERACTION — PLAY BEHAVIOUR TOWARDS RHESUS MACAQUE YOUNG

Trans-mitter	Recei-ver	Chase	%	Sup-plant	%	Threat	%	Attack	%	Play	%	Misc.	%	Total
LJ	RJ	12	7	6	3.5	12	7	1	0.5	139	81.7	1	0.5	171
LJ	RI	1	2	5	10.2	5	10.2	4	8.1	34	69.3	—	—	49
LI	RI	—	—	—	—	—	—	—	—	28	100.0	—	—	28
LI	RI	2	2.8	1	1.4	4	5.7	2	2.8	58	84	2	2.8	69
		15		12		21		7		259		3		317

RJ = Rhesus juvenile, RI = Rhesus infant, LJ = Langur juvenile, LI = Langur infant.

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2. NOTES ON THE FOOD HABITS OF NILGAI *BOSELAPHUS TRAGOCAMELUS*

In the course of a study on the status and distribution of mammals in Keoladeo National Park, Bharatpur, casual observations were made on the food habits of the nilgai *Boselaphus tragocamelus* from September 1984 to September 1985. Records were also made on the food plants of a tame free ranging nilgai.

In total 48 plant species were observed to be eaten. Of these 13 were tree species, five creepers /stragglers, 16 herbs and nine grasses (Table 1).

In areas where grass was burnt nilgai fed on sprouting shoots of grasses such as *Scirpus tuberosus, Vetiveria zizanoides, Desmostachya bipinnata* and *Cynodon dactylon.* In burnt areas it also fed on fallen *Zizyphus jujuba* fruits and sprouting leaves of *Acacia nilotica, Prosopis spicigera* and *Salvadora persica.*

During leaf shedding season (February and March) the nilgai fed on fallen leaves of *Mitragyna parvifolia.* Similarly, fallen leaves and fruits of *Zizyphus jujuba* were eaten by them from December to February. During monsoon and post monsoon they fed mainly on herbs and grasses. Dry pods of *Prosopis chilensis* and *Acacia nilotica* were also taken during summer.

Studies on food habits of nilgai in Asia show that they are browsers (e.g., Mirza and Khan 1975), while in southern Texas they are grazers (Sheffield *et al.* 1983). However, quantitative studies are required under Indian field conditions to know more about their food habits.

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